

Claims

1. Mixture of isolated or synthetic affinity molecules in a liquid carrier comprising at least two different affinity molecules, each with affinity for a predetermined analyte, for use in a single or multi flow cell piezoelectric crystal micro balance apparatus.
- 5 2. Mixture according to claim 1, wherein each isolated or synthetic affinity molecule forms together with the predetermined analyte an interaction pair selected from the group consisting of anion-cation, antibody-antigen, receptor-ligand, enzyme-substrate, oligonucleotide-oligonucleotide with complementary sequence, oligonucleotide-protein, oligonucleotide-cell, and peptide nucleic acid (PNA) oligomer - polynucleotide, wherein the 10 polynucleotide may be selected from the group consisting of RNA, DNA and PNA polymers complementary to the PNA oligomer.
- 15 3. Mixture according to claim 1 or 2, wherein each isolated or synthetic affinity molecule is selected from the group consisting of monospecific polyclonal or monoclonal antibodies, antibody fragments or derivatives thereof each with affinity for a predetermined analyte antigen.
4. Mixture according to claim 3, where the concentration of each of the different affinity molecules is between 0.01-0.8 mg/ml of the liquid carrier.
5. Mixture according to any one of claims 1 - 4, wherein the liquid carrier is water and additionally contains a buffer, stabilizers and/or preservatives.
- 20 6. Mixture according to any one of claims 1 - 5, wherein each of the analytes is selected from the group consisting of different narcotics selected from the group consisting of cocaine, heroin, amphetamine, methamphetamine, cannabinoids, tetrahydrocannabinols (THC), and methylenedioxy-N-methylamphetamine (ecstacy).
- 25 7. Mixture according to any one of claims 1 - 5, wherein each of the analytes is selected from the group consisting of different explosives selected from the group consisting of trinitrotoluene (TNT), dinitrotoluene (DNT), hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX), octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazine (HMX), pentaerythritol tetranitrate (PETN), and nitroglycerine (NG).
- 30 8. Mixture according to any one of claims 1 - 5, wherein each of the analytes is selected from the group consisting of different biomolecules, microorganisms and parts thereof.
9. Mixture according to claim 8, wherein the microorganisms are selected from bacteria, bacterial spores, mycobacteria, fungi, and viruses.
- 35 10. Use of a mixture according to any one of claims 1 – 9 for introduction into the liquid flow of a single or multi flow cell piezoelectric crystal micro balance apparatus.

11. Use according to claim 10, wherein the mixture of affinity molecules is mixed with a test sample solution that possibly contains one or several or the predetermined analyte(s) prior to introduction into the liquid flow of the apparatus for affinity binding competition with analyte-analogues of the predetermined analytes which analyte-analogues are immobilized on the electrode(s).for competition mode analysis.

5 12. Use according to claim 10, wherein the introduction into the liquid flow of the apparatus is for activation or reactivation of one or several flow cell crystal electrode(s) by attachment to analyte-analogues of the predetermined analytes which analyte-analogues are immobilized on the electrode(s).

10 13. Use according to any one of claims 10 to 12, wherein the mixture is introduced into the continuous flow of the apparatus at intervals.

14. Use according to claim 13, wherein the interval is selected from the range of 20 minutes to 24 hours.

15 15. Use according to claim 13 or 14, wherein the mixture is introduced into the continuous flow of the apparatus after recovery of the electrode with an pH-lowering agent, such as glycine.

16. Kit containing a stable or stabilized mixture according to any one of claims 1 - 9.